

Course Itinerary

Monday, May 4

8:30 AM – 9:00 AM	Coffee and Breakfast	Hogan 4128
9:00 AM – 9:30 AM	“Welcome to the Course” – Amanda Lee and Paul Thomas	Hogan 4128
	Introductions and Expectations	
9:30 AM – 10:30 AM	Seminar – Neil Kelleher	Hogan 4128
	“An Overview of Top-Down Proteomics”	
10:30 AM – 11:00 AM	Course Photo	TBD
11:00 AM – 12:00 PM	Module A, Part 1 (Tour, Safety, Calibration, Q-Exactive HF)	Hogan 4120
12:00 PM – 1:00 PM	Lunch	Hogan 4128
1:00 PM – 2:00 PM	Seminar – Amanda Lee	Hogan 4128
	“LC and Instrument Methods for Top-Down Proteomics”	
2:00 PM – 5:00 PM	Module B, Part 1 (Direct Infusion, LC/MS, TD Standards)	Hogan 4120
6:00 PM	Dinner with Neil Kelleher and Course Instructors	TBD

Tuesday, May 5

8:30 AM – 9:00 AM	Coffee and Breakfast	Hogan 4128
9:00 AM – 10:00 AM	Seminar – Paul Thomas	Hogan 4128
	“Experiments and Applications of Top-Down Proteomics”	
10:00 AM – 12:00 PM	Module A, Part 2 (Antibody Sample Preparation)	Hogan 4120
12:00 PM – 1:00 PM	Lunch	Hogan 4128
1:00 PM – 5:00 PM	Module B, Part 2 (Data Collection – Antibody)	Hogan 4120
6:30 PM	Chicago Mass Spectrometry Discussion Group Dinner and Talk (optional)	TBD

Wednesday, May 6

8:30 AM – 9:00 AM	Coffee and Breakfast	Hogan 4128
9:00 AM – 12:00 PM	Module B, Part 3 (Fusion Lumos, Native TD on UHMR)	Silverman B550
12:00 PM – 1:00 PM	Lunch	Hogan 4128
1:00 PM – 2:00 PM	Seminar – Paul Thomas	Hogan 4128
	“Top-Down Proteomics Data Analysis, Part 1: Scoring, and Single Protein Analysis”	
2:00 PM – 5:00 PM	Module C (FreeStyle, ProSight Lite, BioPharma Finder)	Hogan 4128
6:00 PM	Dinner on your own	TBD

Thursday, May 7

8:30 AM – 9:00 AM	Coffee and Breakfast	Hogan 4128
9:00 AM – 10:00 AM	Seminar – Rich LeDuc	Hogan 4128
	“Experimental Design for Top-Down Proteomics”	
10:00 AM – 11:00 AM	Seminar – Ryan Fellers/Joe Greer	Hogan 4128
	“Top-Down Proteomics Data Analysis, Part 2: Higher-throughput analysis”	
11:00 AM – 12:00 PM	Module D (ProSightPD, TDPortal, TDViewer)	Hogan 4128
12:00 PM – 1:00 PM	Lunch	Hogan 4128
1:00 PM – 4:00 PM	Module D, continued	Hogan 4128
4:00 PM – 4:30 PM	Wrap-up, Course Evaluation and Final Questions	Hogan 4128

Module A: Sample Preparation for Top-Down Proteomics

Instructors: Amanda Lee and Paul Thomas (with Jeannie Camarillo)

Topics Covered (among others):

- Generation of high quality samples for top-down mass spectrometry
- Introduction of antibody analysis and its sample preparation
- Special considerations for top-down protein analysis as compared to bottom-up proteomics.

Module B: LC/MS Setup, Quality Control, and Data Acquisition for Top-Down Proteomics

Instructors: Amanda Lee and Paul Thomas (with Rafael Melani and Jared Kafader)

Topics Covered (among others):

- Generation of Top-Down MS data sets on the Q-Exactive HF BioPharma
- Introduction to nanoLC and data collection on Orbitrap Fusion Lumos
- Introduction to native Top-Down data collection on Q-Exactive UHMR

Module C: Software and Workflows for Analysis of Simple Top-Down Proteomics Data

Instructors: Paul Thomas, Amanda Lee, and Joe Greer

Topics Covered (among others):

- Tips and Tricks for Top-Down Analysis with FreeStyle
- Analysis of top-down MS data with ProSight Lite
- Analysis of example data from direct infusion, NRTDP Top-Down Standard and Pierce Intact Protein Standard
- Analysis of experimental data with BioPharma Finder

Module D: Workflows for Analysis of Higher-Throughput Top-Down Proteomics Data

Instructors: Ryan Fellers, Rich LeDuc and Joe Greer

Topics Covered (among others):

- Analysis of high-throughput top-down proteomics data with ProSightPD, and TDPortal
- Analysis of example data from a well-characterized experimental dataset
- Visualization of real-world experimental data with TDViewer